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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,103	12/15/2000	Sheng-Hsin Hu	16,029	9923

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

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DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,103

Applicant(s)

HU ET AL.

Examiner

Camie S Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) 61-79 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-60, drawn to coated activated carbon; absorbent articles comprising coated activated carbon and a facemask, classified in class 428, subclass 375.
 - II. Claims 61-79, drawn to a method for producing coated activated carbon material, classified in class 502, subclass 182.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, coated activated carbon can be used for removing impurities from gas or water.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Sebastian Pugliese on 5/9/02 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-60. Applicant in replying to this Office action must make affirmation of this election. Claims 61-79 are withdrawn from

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further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

7. Claim 1 is objected to because of the following informalities: Isovaleric acid is spelled incorrectly. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

9. Claims 13, 24, 25 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. The term "substantially" in claims 13 and 28 is a relative term that renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claim 13 does not distinctly point out that the coating material is opaque. Claim 28 does not distinctly point out that the binding agent is insoluble in water.

11. The phrase "relatively more concentrated" in claims 24 and 25 is a relative phrase that renders the claim indefinite. The phrase "relatively more concentrated" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claims 24 and 25 do not distinctly point out that the masking material is more concentrated than the inner and outer surface of the coating material.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 27-39, 41-43, 47-51, 55-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohama, U.S. Patent No. 5,703,152.

Ohama discloses a liquid absorbing paper-like body such as activated carbon impregnated with a deodorizing composition that can capture bad odor substances such as ammonia and amines as per instant claims 43 and 51 (see column 1, lines 24-41). The reference discloses a deodorizing composition that includes aqueous slurry that can be impregnated in a fibrous material, a masking agent, blowing agent that makes the coating material porous and a pigment as per instant claims 27, 37-39 and 41-42, 47, 50 and 55 (see column 4, lines 12-66). Ohama discloses using water insoluble resins that are hydrophobic such as synthetic rubbers, silicon resins and fluoroethylene resins as deformable binding material making the coating material elastomeric as per instant claims 28-30, 35, 49 and 60 (see column 4, lines 46-54). In addition, Ohama discloses using kaolin as an extender to provide opacity and pigments such as titanium dioxide and colored inorganic pigments so as to provide coloring to the coating material as per instant claims 36-38, 48 and 58 (see column 4, lines 55-65).

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It is also noted that Ohama discloses that the coating composition was applied to a surface of round filter that contained activated carbon having a diameter of 2 mm as per instant claims 56-57 (see column 9, lines 8-10)

The coated activated carbon has a relative adsorption efficiency of at least 30% with respect to ammonia, a Shore A hardness value of less than 70, a Hunter Lab L value of at least 40 and an absolute "a" value or absolute "b" value greater than 10, as these are the physical properties of the coated activated carbon material as per instant claims 27, 31-34, 50, 55 and 59. Therefore, these features are inherent.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 1-6 and 8-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama, U.S. Patent No. 5,703,152.

Ohama discloses a deodorizing composition that can capture bad odor substances such as ammonia and amines when sprayed onto a fibrous material such as activated carbon as per instant claims 1, 5-6 and 22 (see abstract and column 1, lines 24-41). The reference discloses

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using a deformable, hydrophobic binding agent such as synthetic rubber, silicon resins and fluoroethylene resins; a masking agent and a blowing agent as per instant claims 1, 8 and 19-23 (see column 4, lines 12-64). The reference discloses using colored inorganic pigment to color the coating material and kaolin or talc to create an opaque coating material as per instant claims 11 and 13 (see column 4, line 55-61).

The coated activated carbon has a relative adsorption efficiency of at least 30% with respect to ammonia, a Shore A hardness value of less than 70, a Hunter Lab L value of at least 40 and an absolute "a" value or absolute "b" value greater than 10, as these are the physical properties of the coated activated carbon material as per instant claims 1-4, 9-10 and 12. Therefore, these features are inherent.

As a mechanical property, the coated activated carbon has a Particulate Noise Level of about 52 or less and is at least 6 decibels lower than the uncoated activated carbon as per instant claims 14-18. Therefore, these features are inherent.

In the reference, Ohama discloses using metal oxides as per instant claim 26 (see column 3, lines 24-31).

The reference discloses that the metal oxide is 5-80% by weight of the total composition making it more concentrated than the coating material as per instant claims 24-25 (see column 3, lines 31-45).

Ohama does not disclose the add-on level of the coating material as per instant claim 1. It would have been obvious to one of ordinary skill in the art to add at least 5% of the coating material to the activated carbon in order to obtain better adsorption of odors and lower particulate noise.

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Claims 22 and 26 are product-by-process claims. Even though the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. The coated activated carbon is not a different product from the prior art because of the process.

16. Claims 7, 44-45 and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama, U.S. Patent No. 5,703,152 in view of Mauro et al., U.S. Patent No. 5,480,636 and in further view of Hawley's Condensed Chemical Dictionary, 14th Edition.

Ohama discloses using an aqueous or resin composition impregnated onto activated carbon to capture bad odors with features relied upon above. Ohama does not disclose capturing dimethyldisulfide odors as per instant claim 7. Nor does the reference disclose the activated carbon particles used in an absorbent article such as a sanitary napkin or a diaper as per instant claims 44-45 and 52-53. Mauro teaches the use of an odor controlling composition impregnated onto activated carbon to remove malodorous gases such as dimethylsulfide that may be found on sanitary napkins or a paper diaper (see abstract and column 1, lines 16-39). It is known that methyl sulfide (dimethyldisulfide) is a gas odorant by *Hawley's Condensed Chemical Dictionary, 14th Edition, page 400*. It would have been obvious to use a sanitary napkin or paper diaper as they contain activated carbon, which is used to contain ammonia and amine odors due to the excretion of bodily fluids and material.

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17. Claims 40, 46 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama, U.S. Patent No. 5,703,152 in view of Pyzel, U.S. Patent No. 3,731,678.

Ohama discloses using a deodorizing composition impregnated onto activated carbon to capture bad odors with features relied upon above. The reference does not disclose that the coated activated carbon is granular nor a face mask. Pyzel teaches a smoke inhalation protector worn on the face that contains activated carbon as an adsorbent material as per instant claims 46 and 54 (see column 1, lines 11-34). Pyzel also teaches that the activated carbon be in granular form as per instant claim 40 (see column 6, lines 22-30). It would have been obvious to use the granular form of activated carbon because discrete granules permit air to be drawn easily through the material and increases adsorbent capacity.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone numbers for the Group are (703) 872-9310 {before finals} and (703) 872-9311 {after finals}.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

